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AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-22. (Canceled)

23. (Currently amended) ~~The luminance control method according to claim 19, further comprising the steps of:~~

A luminance control method for a liquid crystal display device, which comprises a liquid crystal panel, a backlight disposed at the back of the liquid crystal panel and a luminance detecting unit for detecting a luminance of the backlight, for controlling an input level of a video signal to be inputted into the liquid crystal panel to control transmittance of the liquid crystal panel and provide a gray-level display, comprising

performing, at a time before actually displaying an image, the steps of:

measuring a luminance of light emitted from the backlight through the liquid crystal panel in a plurality of states where the liquid crystal panel has a predetermined transmittance and the backlight has a different luminance, and preliminarily storing the measured luminance of light emitted through the liquid crystal panel as associated with the luminance of the backlight detected by the luminance detecting unit for each of the plurality of states, respectively; and

measuring a luminance of light emitted through the liquid crystal panel in each input level, and preliminarily storing the measured luminance associated with an input level which gives the luminance; and

subsequently performing, at a time of actually displaying the image, the steps of:

setting a desired luminance set value of light emitted through the liquid crystal panel in a state where the liquid crystal panel has a predetermined transmittance;

calculating a luminance of the backlight to be detected by the luminance detecting unit which results in the set desired luminance set value of light emitted through the liquid crystal panel, on the basis of the preliminarily stored luminance association in each state;

controlling the luminance of the backlight so as to be the calculated luminance;

calculating a luminance of light emitted through the liquid crystal panel in each input level and a luminance to be set in each gray level in a case of the luminance set value, on the basis of the stored luminance and input level;

extracting an input level, which gives a luminance substantially equal to the luminance to be set in each gray level, on the basis of the luminance in each calculated input level and the luminance to be set in each gray level, and storing the extracted input level associated with a gray level; and

controlling the transmittance of the liquid crystal panel in a gray level associated with the input level of the video signal.

24. (Previously presented) The luminance control method according to claim 23, wherein the luminance set value is a luminance in a state where the transmittance of the liquid crystal panel is a controllable maximum transmittance.

25. (Previously presented) The luminance control method according to claim 23, wherein one state of the plurality of states is a state where the backlight has a controllable maximum luminance and another state of the plurality of states is a state where the backlight has a controllable minimum luminance.

26. (Previously presented) The luminance control method according to claim 24, wherein one state of the plurality of states is a state where the backlight has a controllable maximum luminance and another state of the plurality of states is a state where the backlight has a controllable minimum luminance.

27. (Currently amended) ~~The luminance control method according to claim 19, further comprising the steps of:~~

A luminance control method for a liquid crystal display device, which comprises a liquid crystal panel, a backlight disposed at the back of the liquid crystal panel and a luminance detecting unit for detecting a luminance of the backlight, for controlling an input level of a video signal to be inputted into the liquid crystal panel to control transmittance of the liquid crystal panel and provide a gray-level display, comprising

performing, at a time before actually displaying an image, the steps of:

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measuring a luminance of light emitted from the backlight through the liquid crystal panel in a plurality of states where the liquid crystal panel has a predetermined transmittance and the backlight has a different luminance, and preliminarily storing the measured luminance of light emitted through the liquid crystal panel as associated with the luminance of the backlight detected by the luminance detecting unit for each of the plurality of states, respectively; and

subsequently performing, at a time of actually displaying the image, the steps of:

setting a desired luminance set value of light emitted through the liquid crystal panel in a state where the liquid crystal panel has a predetermined transmittance;

calculating a luminance of the backlight to be detected by the luminance detecting unit which results in the set desired luminance set value of light emitted through the liquid crystal panel, on the basis of the preliminarily stored luminance association in each state; and

controlling the luminance of the backlight so as to be the calculated luminance, the method further comprising the steps of:

measuring a luminance of light emitted through the liquid crystal panel in each input level;

normalizing each measured luminance, and preliminarily storing each normalized luminance associated with an input level which gives the luminance;

calculating a luminance of light emitted through the liquid crystal panel in each input level and a luminance to be set in each gray level in a case of the luminance set value, on the basis of the stored luminance and input level;

extracting an input level, which gives a luminance substantially equal to a luminance to be set in each gray level, on the basis of the luminance in each calculated input level and the luminance to be set in each gray level, and storing the extracted input level associated with a gray level; and

controlling the transmittance of the liquid crystal panel in a gray level associated with the input level of the video signal.

28.   (Previously presented)   The luminance control method according to claim 27, wherein the luminance set value is a luminance in a state where the transmittance of the liquid crystal panel is a controllable maximum transmittance.

29.   (Previously presented)   The luminance control method according to claim 27, wherein one state of the plurality of states is a state where the backlight has a controllable maximum luminance and another state of the plurality of states is a state where the backlight has a controllable minimum luminance.

30.   (Previously presented)   The luminance control method according to claim 28, wherein one state of the plurality of states is a state where the backlight has a controllable maximum luminance and another state of the plurality of states is a state where the backlight has a controllable minimum luminance.

31-32. (Canceled)

33.   (Currently amended)   ~~The liquid crystal display device according to claim 31~~A liquid crystal display device, which comprises a liquid crystal panel and a backlight disposed at the back of the liquid crystal panel, for controlling an input level of a video signal to be inputted to the liquid crystal panel to control transmittance of the liquid crystal panel and provide a gray-level display, comprising:

a luminance detecting unit for detecting a luminance of the backlight;

a first storage unit for preliminarily storing, at a time before actually displaying an image, first information in which the luminance detected by the luminance detecting unit, in a plurality of states where the liquid crystal panel has a predetermined transmittance and the backlight has a different luminance, is associated with a luminance of light emitted from the backlight through the liquid crystal panel;

an accepting unit for accepting, at a time of actually displaying the image, a desired luminance set value of light emitted through the liquid crystal panel in a state where the liquid crystal panel has a predetermined transmittance;

a first calculating unit for calculating, at a time of actually displaying the image, a luminance of the backlight to be detected by the luminance detecting unit which results in the desired luminance set value of light emitted through the liquid crystal panel accepted by the

accepting unit, on the basis of the first information preliminarily stored in the first storage unit; and

a luminance control unit for controlling, at a time of actually displaying the image, the luminance of the backlight so as to be the luminance calculated by the first calculating unit, wherein

the first storage unit further stores second information on a luminance of light emitted through the liquid crystal panel in each input level, and

the liquid crystal device further comprises:

a second calculating unit for calculating a luminance of light emitted through the liquid crystal panel in each input level in a case of the luminance set value accepted by the accepting unit, on the basis of the second information;

a third calculating unit for calculating a luminance to be set in each gray level in a case of the luminance set value accepted by the accepting unit;

a fourth calculating unit for calculating a luminance difference between the luminance to be set in each gray level calculated by the third calculating unit and the luminance in each input level calculated by the second calculating unit;

a second storage unit for storing an input level, which gives a minimum luminance difference calculated by the fourth calculating unit, associated with a gray level; and

a control unit for controlling the transmittance of the liquid crystal panel in a gray level associated with the input level of the video signal.

34. (Previously presented) The liquid crystal display device according to claim 33, wherein the luminance detecting unit has: a photoelectric converter for converting the luminance of the backlight into an analog-type electric signal having a voltage corresponding to the luminance of the backlight; and an analog-digital converter for converting the converted analog-type electric signal into a digital-type electric signal.

35. (Canceled)

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36.   (Currently amended)   ~~The recording medium according to claim 35~~A recording medium on which a computer program for causing a computer to output control information to a liquid crystal display device comprising a liquid crystal panel and a backlight disposed at the back of the liquid crystal panel and causing the computer to control an input level of a video signal to be inputted into the liquid crystal panel to control transmittance of the liquid crystal panel and provide a gray-level display is recorded, said computer program comprising

performing, at a time before actually displaying an image, the step of:

causing the computer to preliminarily store in a storage unit a luminance of the backlight, in a plurality of states where the backlight has a different luminance, as associated with a luminance of light emitted from the backlight through the liquid crystal panel in each of the plurality of states, respectively; and

subsequently performing, at a time of actually displaying the image, the steps of:

causing the computer to set a desired luminance set value of light emitted through the liquid crystal panel;

causing the computer to calculate control information for controlling a luminance of the backlight which results in the set luminance set value of light being emitted through the liquid crystal panel, on the basis of first information preliminarily stored in the storage unit; and

causing the computer to output the calculated control information to the liquid crystal display device, wherein said computer program further comprises the steps of:

causing the computer to store in a storage unit second information on a luminance of light emitted through the liquid crystal panel in each input level;

causing the computer to calculate a luminance of light emitted through the liquid crystal panel in each input level in a case of the inputted luminance set value, on the basis of the stored second information;

causing the computer to calculate a luminance to be set in each gray level in a case of the inputted luminance set value;

causing the computer to calculate a luminance difference between the calculated luminance to be set in each gray level and the calculated luminance in each input level; and

causing the computer to store in the storage unit an input level, which gives a minimum calculated luminance difference, associated with a gray level.